

THREE-TERMINAL MAGNETOSTATICALLY COUPLED SPIN TRANSFER-BASED MRAM CELL

ABSTRACT OF THE DISCLOSURE

5. A magnetic memory device for reading and writing a data state comprises at least three terminals including first, second, and third terminals. The magnetic memory device also includes a spin transfer (ST) driven element, disposed between the first terminal and the second terminal, and a readout element, disposed between the second terminal and the third terminal. The ST driven element includes a first
10 free layer, and a readout element includes a second free layer. A magnetization direction of the second free layer in the readout element indicates a data state. A magnetization reversal of the first free layer within the ST driven element magnetostatically causes a magnetization reversal of the second free layer in the readout element, thereby recording the data state.

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